

2004 School Fruit & Vegetable Procurement Study

**Final Report
November 2004**

School Nutrition Association

Acknowledgments

The School Nutrition Association would especially like to thank the district directors who volunteered to participate in this research study. Completion of the survey required a considerable amount of time and effort by district directors. This study would not be possible without their cooperation and dedication.

Executive Summary

The School Nutrition Association (SNA) is seeking to assess fruit and vegetable procurement practices in school foodservice. The purpose of this study was to collect specific data on the amount of fruit and vegetables currently being purchased by school foodservice programs through the federal commodity program and all other sources. Additionally, this study collected demographic information to assess fruit and vegetable procurement practices in relation to school district characteristics.

The current sample was the same set used in the 1998 USDA *School Food Purchase Study: Final Report*. The sample included 481 school districts drawn from 11,177 existing unified public school districts nationwide. A total of 164 districts responded, a response rate of 34.1%.

Several overarching conclusions can be seen in the data collected. Chief among them are the following:

- ✓ There is a clear propensity among the districts to obtain far more fruits and vegetables from open market sources than the federal commodity program. Regardless of how the data are tracked, the volume from the open market exceeds — sometimes by as much as a factor of ten — the volume through the federal commodity program. It is readily apparent that volume statistics limited to the federal commodity program are not accurate indicators of the total volume of fruits and vegetables obtained and used by school foodservice.
- ✓ The federal commodity program is primarily used as a source for canned fruits and vegetables. Fresh produce is far more often obtained on the open market. This trend is seen across all districts sizes.
- ✓ Fruits and vegetables are used in many service venues, and are not limited to reimbursable meal service. Points of service such as salad bars, the After School Snack Program, and a la carte service are significant sources where students have access to fruits and vegetables. Vending service is, however, the exception. While 100% juice is reasonably available through vending, fresh or processed fruits and vegetables are rarely offered as a vending item despite the near ubiquity of vending service.
- ✓ Respondents commonly request more funding as a way to increase their fruit and vegetable procurement. There is a strong sentiment among the district foodservice directors that they want to provide more fruits and vegetables to their students, but are hampered by the higher costs embodied in procurement, preparation, and storage of these items.

A brief summary of the survey findings, organized by topical area, is presented below.

District Profile

- ✓ Responses were received from 40 states, with California being the best-represented state in the sample (12.2%). The responses are well-balanced across all district size categories, with reasonably equal representation of every district size within the sample. The 1,000-2,499 category is best represented, with a 23.2% response. Respondents report a median of four elementary, one middle, and one high school in their district.
- ✓ On average, nearly all schools in any given district participate in the National School Lunch Program (NSLP). Rates are slightly lower for the School Breakfast Program (SBP), with an average of about 80% of the schools in the district participating. The After School Snack Program is relatively uncommon — participation peaks at an average of 17.8% of elementary schools, falling to 13.9% of middle schools, and further down to 6.6% of high schools. Examining the data on the basis of any level of participation shows that 100% of the respondents have at least one school in their district that participates in the NSLP; 89% have at least one school that participates in the SBP; and 30.5% have at least one school that participates in the After School Snack Program.
- ✓ ADP rates for the NSLP and SBP span a wide range. NSLP ADP rates are clustered in the 60% to 80% range (average of 64.7%). The SBP ADP rates lag considerably, with most clustered in the 11% to 30% range (average of 27.8%). ADP rates tend to drop as district size increases.
- ✓ An on-site kitchen is the most popular response (77.4%) when the survey respondents describe the kitchen(s) operated by their district. “Base kitchen” is the next most popular response, although it trails “on-site kitchen” by a wide margin. Less than 10% operate a central kitchen.

Programs and Services

- ✓ Respondents are about equally divided between “centralized” and “both centralized and decentralized” when asked to describe the level at which decisions are made regarding ordering fresh fruits and vegetables. Relatively few (14.6%) operate strictly upon a decentralized basis. Cooperative buying of fruits and vegetables with other districts is not relatively common, cited by less than 20% of the respondents. Only 11.1% of districts (18 respondents) are operated by a private management company.

- ✓ A majority of respondents (53%) report that they offer salad bar service in at least one school in their district. Those offering salad bar service typically do so every day of the week.
- ✓ Nearly one-half (44.6%) of the respondents report that their district participates in the DOD Fresh Program. The most common participation method is for commodity entitlement, with only 8.5% reporting using the program for all fruit and vegetable purchases. Apples and oranges are the most popular fruits received by districts through the DOD Fresh Program. Carrots and lettuce (the latter encompassing leaf lettuce of various types, salad mixes, and chopped salad) are the most popular vegetables.
- ✓ Overall, 58.4% of those who operate the After School Snack Program serve fruits and vegetables through the program. This percentage increases strongly with district size — only about one-third of the smaller districts with this program serve fruits and vegetables through the program versus 71% of the larger districts. Those who serve fruits and vegetables through the After School Snack Program typically do so two to three times per week.
- ✓ A la carte service is quite popular, offered by 83.5% of the respondents in at least one school in their district. Fresh fruits and vegetables are commonly offered on a la carte lines, especially in middle and high schools. Processed fruits and vegetables are offered less than fresh, but are also readily available to students via a la carte service.
- ✓ Student-accessible vending machines are available, to some extent, in nearly 85% of the districts. Full-strength (100%) juice is commonly offered in vending machines that are located in middle and high schools. These juices are especially popular in high schools, with 75.4% of those with high school vending machines noting that they offer 100% juice in vending machines. The sale of fresh fruits and vegetables through vending is quite rare. None of the respondents report selling these items in their elementary and middle school vending machines, and only 2.2% report selling them in their high school vending machines. A similar picture is seen regarding processed fruits and vegetables, with less than three percent selling them via vending at any grade level.

Fruit and Vegetable Procurement Practices

- ✓ District directors reported ordering significantly more fresh produce from the open market than the federal commodity program. The typical respondent reports purchasing a total of 1,584 pounds of fresh fruit and 2,910 pounds of fresh vegetables from the federal commodity program. Procurement from all other sources is considerably higher, with respondents reporting a median of 7,789 pounds of fresh fruit and 7,200 pounds of fresh vegetables. This trend toward ordering more from the open market versus the federal commodity program holds true for all types of fruits and vegetables examined except for dried fruit. Segmenting responses by district size shows the amount spent rising proportionally with increased enrollment. In every case, the amount spent from other sources exceeds the amount spent through the federal commodity program, often by a wide margin.
- ✓ The largest proportion of commodity program expenditures are spent on canned fruits and vegetables. In contrast, the largest proportion of open market expenditures are spent on fresh produce. Respondents spent an average of 45.6% of their total federal commodity purchases on canned items, with the balance about equally divided between fresh and frozen items. In contrast, an average of 45.7% of the non-commodity spending was on fresh items. Dried items represent the smallest level of expenditure regardless of purchase source.
- ✓ Survey respondents report that the total Fair Market Value (FMV) of commodity procurement for all food categories is a median of \$62,612. Total food expenditures for all food categories is a median of \$543,251. Respondents report that the total Fair Market Value (FMV) of commodity procurement represents a median of 13.3% of their total food expenditures. The total amount spent through the federal commodity program represents a median of only 3.8% of total food expenditures. The amount spent through other sources is considerably higher, reaching a median of 11.8% of total food expenditures.
- ✓ An increase in student demand, a decrease in cost, and an increase in the amount of reimbursable funding are the primary factors identified by the survey respondents as important in their district's decision to order a larger quantity of fresh fruits and vegetables.

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I. Introduction and Methodology

The School Nutrition Association (SNA) is seeking to assess fruit and vegetable procurement practices in school foodservice. The purpose of this study was to collect specific data on the amount of fruit and vegetables currently being purchased by school foodservice programs through the federal commodity program and all other sources. Additionally, this study collected demographic information to assess fruit and vegetable procurement practices in relation to school district characteristics.

Survey Instrument The survey was designed to collect data pertaining to the 2003-2004 school year. To support as significant a response rate as possible, the instrument was limited to four question pages. The survey consisted of the following major areas:

- ▶ **Contact Information** — each survey was personalized with a name and address label to allow for efficient response tracking and non-respondent follow-up. As an incentive, respondents were invited to provide their e-mail address to receive an e-mailed copy of the compiled survey results;
- ▶ **District Demographics** — this section concentrated on collecting baseline data on each district, such as enrollment, average daily participation (ADP), type(s) of kitchens operated, and other similar metrics and district demographics;
- ▶ **Programs and Services** — this section encompassed questions on key issues impacting fresh fruit and vegetable procurement concerning key service offerings (salad bar service, a la carte services, student-accessible vending machines, and the After School Snack Program), the presence of a foodservice management company, and participation in the Department of Defense Fresh Program;
- ▶ **Fruit and Vegetable Procurement Practices** — this examined, in specific detail, procurement levels of fresh, frozen, canned, and dried fruits and vegetables through the federal commodity program and all other sources. Each fruit and vegetable category was tracked by the total pounds or cases received and the total dollar value. Directors were also asked to identify factors impacting their decision to order a larger quantity of fruits and vegetables.

A copy of the survey instrument is provided in Appendix C.

Sample The current sample was the same set used in the 1998 USDA *School Food Purchase Study: Final Report*. The sample included 481 school districts drawn from 11,177 existing unified public school districts nationwide. The selected sample was determined regionally representative¹. This sample was stratified based on ten farm production regions used by USDA for reporting purposes.

Because the sample was developed six years ago, a full-time temporary employee and three SNA administrative staff updated the sample to reflect a current list of district director names. Telephone calls were made to each district to confirm the current district director name.

Data Processing A paper survey was mailed to select district directors. The data was collected during August and September of 2004. SNA received weekly updates from the research firm (AWP Research) that collected and tabulated the responses. SNA conducted follow-up emails for district directors for whom SNA had email addresses, while follow-up phone calls were conducted with the remaining district directors. The deadline was extended by 10 days to allow more time for respondents to complete the survey.

Data Analysis A total of 164 districts responded (a response rate of 34.1%). While the overall response pool is an effective sample with which to work, the completion rate for some portions of the survey is relatively poor. For example, more than one-half of the respondents did not provide specific quantity or dollar amount data in the Fruit and Vegetable Procurement Practices section of the survey. This low completion rate for some questions does curtail the level of analysis that can be implemented — some data elements have too few responses to permit segmentation by district size and region.

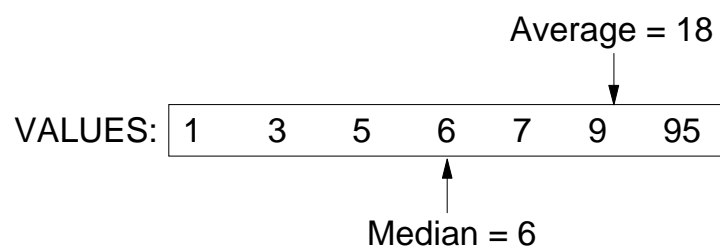
However, with the exception of areas previously noted, the remainder of the survey enjoyed high completion rates, allowing the data to be segmented to explore group-to-group variations. Primary segmentation methods are based upon the two major factors affecting fruit and vegetable procurement: 1) district size, and 2) geographic location. Further details on segment composition are provided in Section II of this report.

The average (also called the mean) and the median are two summary statistics used throughout this report to describe the data collected. Though closely related, each describes a different facet of the data. The **average** is computed by taking the sum of all responses divided by the number of responses. The **median** is computed by ordering all responses, then taking the response which falls at the midpoint. As illustrated in the diagram on the following page, the average is influenced by very large or very small numbers; the median is not. This typically makes the median a more representative

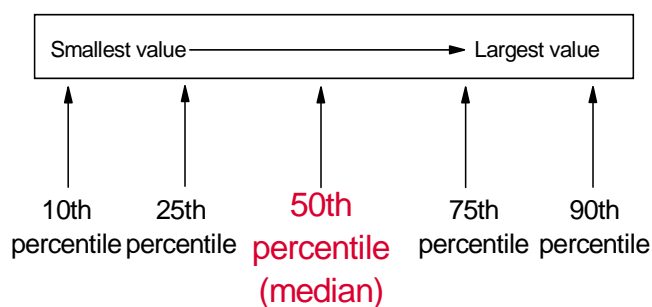
¹

School Food Purchase Study: Final Report. United States Department of Agriculture. Food and Consumer Service. Office of Analysis and Evaluation. October 1998

indicator of the data when there are relatively small sample sizes or significant outliers.



Percentiles are a variation on the median, and are especially helpful in interpreting the scope of the data. As illustrated previously, the median splits the data into two equal parts. Percentiles go one step further, splitting the data into additional parts. It's common to use either three segments (25th, 50th, and 75th) or five (10th, 25th, 50th, 75th, and 90th), but any number of divisions can be made.



Percentiles help in data interpretation by providing flexibility in comparing one district's data against others. For example, let's assume the following values for total foodservice budget:

- ▶ 10th percentile = \$10,000;
- ▶ 25th percentile = \$30,000;
- ▶ 50th percentile (also known as the median) = \$70,000;
- ▶ 75th percentile = \$150,000;
- ▶ 90th percentile = \$300,000.

This means that 25% of the districts in the sample have a budget of \$30,000 or less; 75% have a budget of greater than \$30,000. Knowing where one district falls within the continuum of values will help benchmark that district against all others in the sample.

Limitations and Strengths The current study provides thorough insight on a rarely reviewed area: school fruit and vegetable procurement practices in schools using the federal commodity program and open market sources. To our knowledge, little to no published data currently exists on recent fruit and vegetable procurement practices in schools, which compare procurement through the open market versus the federal commodity program. The survey also examined highly detailed procurement practices, including fresh versus processed and fruit versus vegetable.

The primary limitation of the current study is the small number of responses. Although the response rate was 34.1%, only 164 responses were received and directors from only 40 states responded. Due to the small number of responses, segmentation by region and district enrollment size must be viewed with skepticism as some of the regional variations may actually be due to differences in the district size distribution. Furthermore, the assessment of procurement of fruits and vegetables by the open market versus the federal commodity program could not be segmented by region or district size due to the low completion rate of the question. Several respondents reported that the information requested was not readily available at the time this study was conducted. Finally, the survey sample was also the same one used for the 1996 and 1997 school year, which may not accurately represent all districts nationwide due to population shifting.

Funding for the project was provided by the United States Department of Agriculture Agricultural Marketing Service. Additional research support was provided by the Office of Analysis Nutrition and Evaluation.

II. Survey Findings

A. District Profile

Geographic Location Responses were received from 40 states. California is the best-represented state in the sample, accounting for 12.2% of the responses. This is nearly twice as common as the next most prevalent state. The top eight states illustrated in Exhibit 1 account for one-half of the total sample.

Segmenting responses by the seven SNA regions shows a generally balanced distribution except for the Northwest region. The latter, as illustrated in Exhibit 2, accounts for only 4.3% of the sample (seven respondents).

Top Represented States

California	12.2%
Pennsylvania	6.7%
Texas	6.7%
New York	6.1%
Illinois	4.9%
Indiana	4.9%
Michigan	4.3%
Ohio	4.3%

All other states each account for 3% or less of the total sample.

Exhibit 1

Regional Distribution

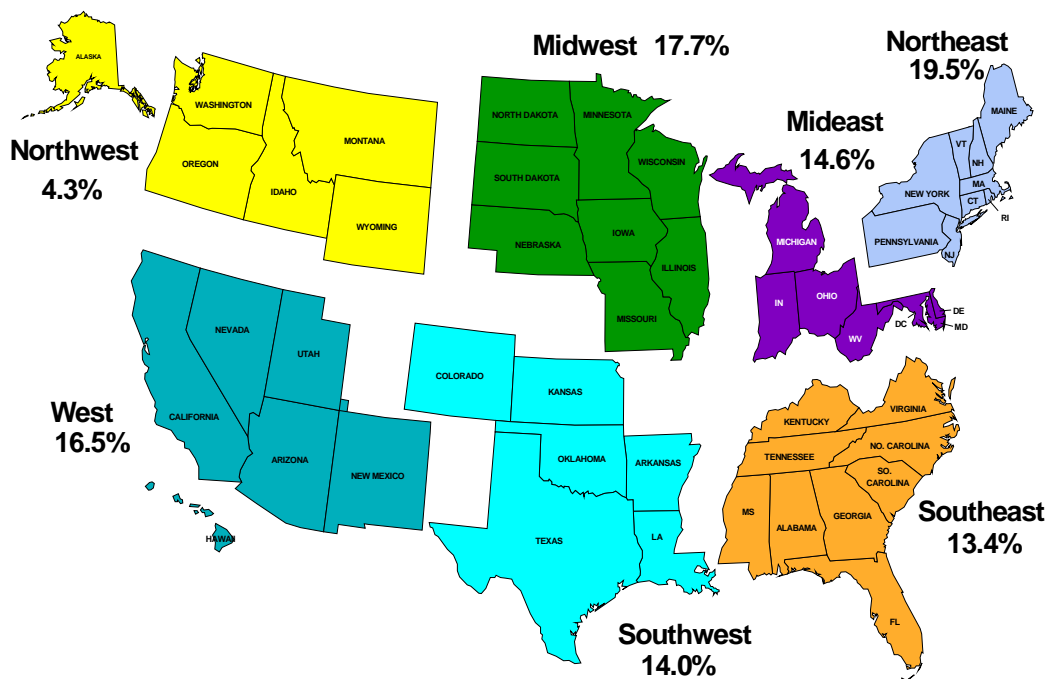


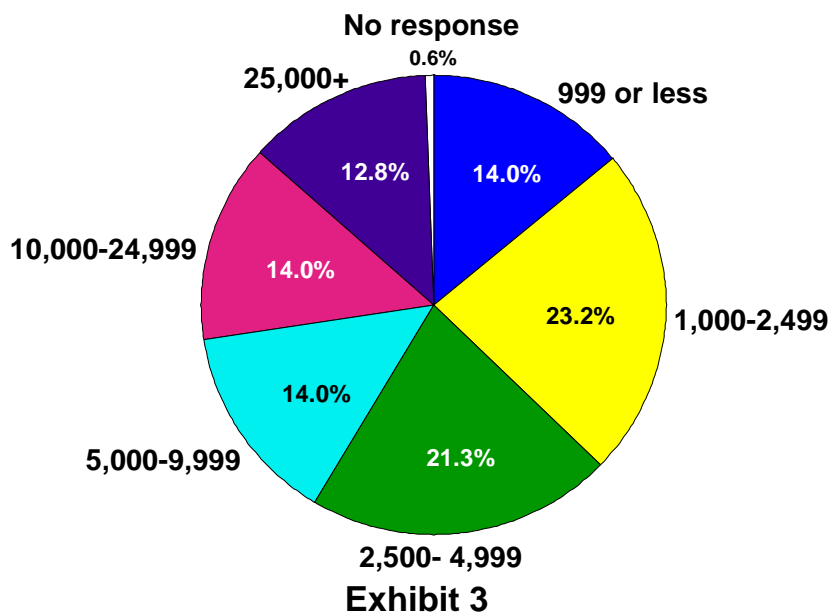
Exhibit 2

To permit a more focused analysis and maintain adequate sample sizes within each regional category, the Northwest and West regions were combined. The following categories are used for all subsequent regional breakouts:

SNA Region	Number of responses	% of sample
Mideast	24	14.6%
Northeast	32	19.5%
Southeast	22	13.4%
West/Northwest	34	20.7%
Midwest	29	17.7%
Southwest	23	14.0%

District Enrollment The responses are well-balanced across all district size categories, with reasonably equal representation of every district size within the sample. As summarized in Exhibit 3, the 1,000-2,499 category is best represented, with a 23.2% response. Least common are the very large districts (enrollments of greater than 25,000 students) but even this latter category accounts for 12.8% of the sample.

District Enrollment



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To permit a more focused analysis and ensure adequate sample sizes within each district category, the data were segmented into the following three groups:

District size (enrollment)	Number of responses	% of sample
Under 2,500	61	37.2%
2,500-9,999	58	35.4%
10,000+	44	26.8%

NOTE: One respondent did not provide district enrollment data.

There are significant district size variations across regions. As summarized in Exhibit 4, the largest districts tend to be clustered in the West/Northwest and Southwest regions. The Southeast tends to be dominated by mid-size districts — only 4.5% of the districts in the Southeast fall into the “small” category. In contrast, 62.1% of the districts in the Midwest are “small.” Thus, some of the regional variations seen throughout this report may be due more to differences in district size distribution across regions rather than an issue or factor specific to a geographic area of the country.

Exhibit 4: District Size by Region

		Enrollment			Median number of schools		
		Under 2,500	2,500- 9,999	10,000+	Elementary	Middle	High
Overall		37.2%	35.4%	26.8%	4	1	1
Region	ME	50.0%	33.3%	16.7%	3	1	1
	NE	50.0%	31.3%	18.8%	4	1	1
	SE	4.5%	59.1%	31.8%	9	3	2
	W/NW	26.5%	32.4%	41.2%	7	2	2
	MW	62.1%	24.1%	13.8%	3	1	1
	SW	21.7%	39.1%	39.1%	8	3	2

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Number of Schools The number of schools in the district vary widely — the sample contains representation from districts with as few as one elementary school to as many as 768. As summarized in Exhibit 5, the “typical” respondent reports four elementary, one middle, and one high school in their district. As noted previously, the greatest concentration of elementary schools is found in the Southeast and Southwest regions. The number of middle and high schools do not vary markedly across regions.

Exhibit 5: Number of Schools

	Low	Median	High	Average	Number of responses
Elementary schools	1	4	768	15.5	163
Middle schools	0	1	210	4.4	163
High schools	0	1	270	4.2	163

Program Participation On average, nearly all schools in any given district participate in the National School Lunch Program (NSLP). Rates are slightly lower for the School Breakfast Program (SBP), with an average of about 80% of the schools in the district participating. There is slightly less participation in the SBP in high schools, with an average of 77.8% participating in the program. The After School Snack Program is relatively uncommon — participation peaks at an average of 17.8% of elementary schools, falling to 13.9% of middle schools, and further down to 6.6% of high schools. Overall responses are summarized in Exhibit 6. Note that the data in Exhibit 6 do not address the number of students participating in the program, but rather describe the average number of schools in each district that participate. Average Daily Participation (ADP) is explored on page 11.

Examining the data on the basis of any level of participation shows that 100% of the respondents have at least one school in their district that participates in the NSLP; 89% have at least one school that participates in the SBP; and 30.5% have at least one school that participates in the After School Snack Program.

Exhibit 6: Program Participation

<i>{Data are the average percentage of schools in each district participating in the program}</i>	Elementary	Middle	High
National School Lunch Program	98.9%	98.6%	97.5%
School Breakfast Program	81.8%	83.3%	77.8%
After School Snack Program	17.6%	13.9%	6.6%

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Examining the average number of schools participating by district size and region shows no significant variation for the NSLP. Virtually all schools in all districts participate. There are some modest variations for the SBP across district size categories, with the average number of schools participating increasing somewhat in the largest districts. More significant variations are seen by region, with the SBP far less prevalent in the Mideast, and nearly ubiquitous in the Southeast.

District participation in the After School Snack Program varies widely by region, grade level, and district size. Overall, participation decreases as grade level increases. Participation by elementary schools is significantly higher (17.6%) than middle (13.9%) and high schools (6.6%). The highest reported elementary school participation is in the Southeast region (35.5%), whereas the Mideast reported only 2.4% of elementary schools participating. Interestingly, only 2.4% of districts in the Southeast reportedly offer the After School Snack Program in high schools, compared to 8.3% in the Mideast.

Responses by district size and region are illustrated in Exhibit 7 below.

Exhibit 7: Program Participation by District Size and Region				
<i>{Data are the average percentage of schools in each district participating in the program}</i>		National School Lunch Program		
		Elementary	Middle	High
Overall		98.9%	98.6%	97.5%
District size	Under 2,500	97.8%	95.7%	96.6%
	2,500-9,999	99.2%	100.0%	99.1%
	10,000+	100.0%	100.0%	96.5%
Region	ME	99.0%	90.0%	91.3%
	NE	100.0%	100.0%	98.9%
	SE	100.0%	100.0%	100.0%
	W/NW	99.4%	100.0%	98.9%
	MW	95.4%	100.0%	100.0%
	SW	100.0%	100.0%	94.3%

Table continued on following page

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Exhibit 7: Program Participation by District Size and Region

<i>{{Data are the average percentage of schools in each district participating in the program}}</i>		School Breakfast Program		
		Elementary	Middle	High
Overall		81.8%	83.3%	77.8%
District size	Under 2,500	80.6%	80.9%	72.9%
	2,500-9,999	76.4%	79.3%	78.2%
	10,000+	90.7%	91.5%	83.7%
Region	ME	61.0%	48.3%	47.8%
	NE	74.1%	80.3%	70.8%
	SE	100.0%	100.0%	97.9%
	W/NW	85.2%	84.0%	76.2%
	MW	80.0%	89.1%	86.2%
	SW	95.5%	96.8%	91.1%
<i>{{Data are the average percentage of schools in each district participating in the program}}</i>		After School Snack Program		
		Elementary	Middle	High
Overall		17.6%	13.9%	6.6%
District size	Under 2,500	6.7%	7.4%	7.6%
	2,500-9,999	23.7%	14.7%	4.3%
	10,000+	22.9%	18.1%	7.1%
Region	ME	2.4%	0.0%	8.3%
	NE	10.0%	10.5%	3.8%
	SE	35.5%	30.6%	2.4%
	W/NW	23.7%	18.2%	10.0%
	MW	9.2%	7.8%	0.5%
	SW	29.4%	15.1%	15.2%

Average Daily Participation

Average daily participation² (ADP) rates for the NSLP and SBP span a wide range. As illustrated in Exhibits 8A, NSLP ADP rates are clustered in the 60% to 80% range. The most popular response is an ADP rate of 71% to 80%, indicated by 22.6% of the respondents.

Average Daily Participation National School Lunch Program

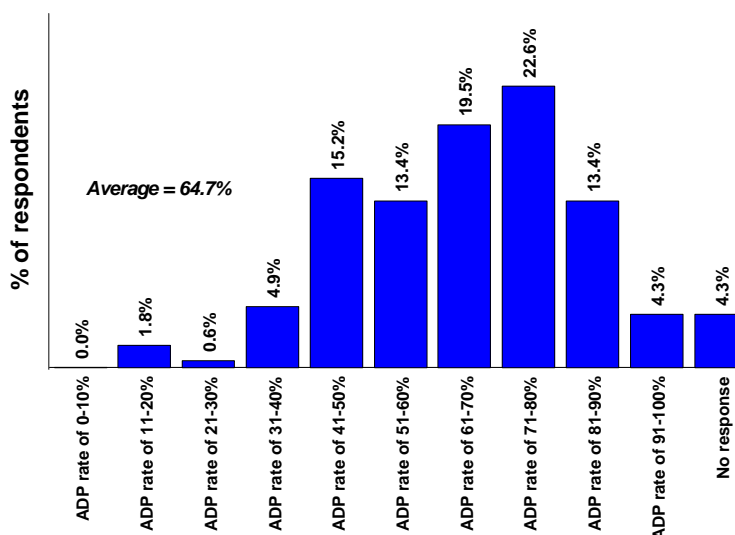


Exhibit 8A

Average Daily Participation School Breakfast Program

In contrast, the SBP ADP rates lag considerably. As illustrated in Exhibit 8B, the most popular response is an ADP rate of 11% to 20%, selected by 25% of the respondents.

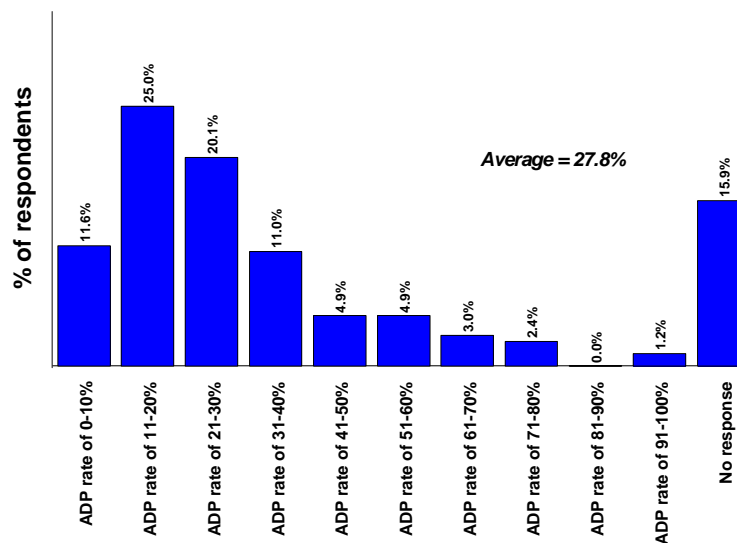


Exhibit 8B

²

Average Daily Participation (ADP): Average Daily Participation means the average number of children, by eligibility category, participating in programs each operating day. These numbers are obtained by dividing (a) the total number of free lunches claimed during a reporting period by the number of operating days in the same period; (b) the total number of reduced price lunches claimed during a reporting period by the number of operating days in the same period; and (c) the total number of paid lunches claimed during a reporting period by the number of operating days in the same period.

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ADP rates tend to drop as district size increases. For example, ADP for the NSLP is 69.1% in the smallest districts but only 59.8% in the largest. Variations are also seen across regions, with NSLP ADP rates peaking at greater than 72% in the Southeast and Midwest regions. Interestingly, the West/Northwest region, while reporting the lowest NSLP ADP (57.8%) also reports the second-highest SBP ADP (31.8%). Responses are summarized in Exhibit 9.

Exhibit 9: ADP Rates by District Size and Region			
{Data are averages}		NSLP	SBP
Overall		64.7%	27.8%
District size	Under 2,500	69.1%	31.8%
	2,500-9,999	63.2%	27.7%
	10,000+	59.8%	22.9%
Region	ME	63.8%	22.8%
	NE	60.7%	23.5%
	SE	72.6%	30.3%
	W/NW	57.8%	31.8%
	MW	72.4%	24.3%
	SW	63.1%	33.1%

Types of Kitchens An on-site kitchen is the most popular response when the survey respondents describe the kitchen(s) operated by their district. As summarized in Exhibit 10, “base kitchen” is the next most popular response, although it trails “on-site kitchen” by a wide margin. Less than 10% operate a central kitchen.

Exhibit 10: Types of Kitchens

Type of kitchen	Description	Response (*)
Central kitchen	Where meals are prepared for serving at receiving or satellite schools. No student meals are served on-site at a central kitchen.	9.8%
Base kitchen	Where meals are prepared for serving on-site and for shipment to other locations (including multiple locations within the same school).	37.8%
Satellite (receiving) kitchen	Where partially or fully prepared meals are obtained from base or central kitchens or an outside vendor. Other than re-heating or refrigeration, no food preparation occurs at a satellite kitchen.	26.2%
Combination kitchen	Where some food is prepared for on-site consumption and some food is received fully or partially prepared from a central or base kitchen.	26.8%
On-site kitchen	Where all meals are prepared at the facility in which the kitchen is located.	77.4%
All others (**)		0.6%
No response		0.6%

(*) = Responses do not sum to 100% since participants could indicate more than one type of kitchen in their district.

(**) = The “other” response consisted of “four production centers located at four high schools.”

“On-site kitchen” remains the most popular response across all segments, often by a wide margin. This type of kitchen operation does, however, decline in prevalence in the largest districts, with a corresponding increase in all other types (especially “satellite” and “combination”). “Central kitchen” is the least popular response across all segments, although it increases to 23.5% in the West/Northwest region. Responses by district size and region are illustrated in Exhibit 11 on the following page.

School Nutrition Association

Exhibit 11: Types of Kitchens by District Size and Region

		Central	Satellite	Combination	Base	On-site
Overall		9.8%	26.2%	26.8%	37.8%	77.4%
District size	Under 2,500	3.3%	9.8%	14.8%	34.4%	83.6%
	2,500-9,999	10.3%	31.0%	25.9%	41.4%	82.8%
	10,000+	18.2%	43.2%	45.5%	38.6%	63.6%
Region	ME	8.3%	25.0%	20.8%	37.5%	75.0%
	NE	3.1%	18.8%	21.9%	34.4%	87.5%
	SE	4.5%	18.2%	4.5%	18.2%	86.4%
	W/NW	23.5%	41.2%	52.9%	52.9%	61.8%
	MW	0.0%	20.7%	27.6%	41.4%	79.3%
	SW	17.4%	30.4%	21.7%	34.8%	78.3%

B. Programs and Services

Purchasing Parameters Respondents are about equally divided between “centralized” and “both centralized and decentralized” when asked to describe the level at which decisions are made regarding ordering fresh fruits and vegetables. As summarized in Exhibit 12, relatively few (14.6%) operate strictly upon a decentralized basis, where decisions are made at the school level. The large majority have some level of centralized purchasing, with decisions made at the district level.

Decision-Making Level

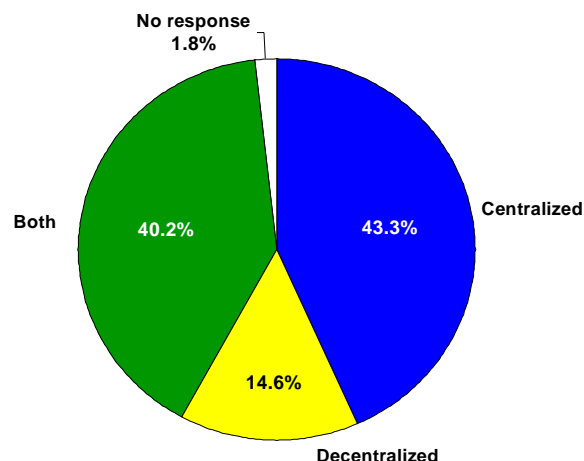


Exhibit 12

A strict reliance upon decentralized ordering for fruits and vegetables is more common in the smaller districts than the larger, although some measure of centralized ordering is still by far the most common situation. As illustrated in Exhibit 13, 32.8% of the smaller districts order using only a decentralized method; only 2.3% (one respondent) from the largest districts order fruits and vegetables in this manner. Variations are also seen based upon region, with decentralized-only purchasing more common in the Midwest and Northeast.

Exhibit 13: Decision-Making Level by District Size and Region

		Centralized	Decentralized	Both	No response
Overall		43.3%	14.6%	40.2%	1.8%
District size	Under 2,500	47.5%	32.8%	18.0%	1.6%
	2,500-9,999	36.2%	5.2%	56.9%	1.7%
	10,000+	47.7%	2.3%	50.0%	0.0%
Region	ME	50.0%	12.5%	37.5%	0.0%
	NE	40.6%	21.9%	37.5%	0.0%
	SE	31.8%	0.0%	63.6%	4.5%
	W/NW	50.0%	8.8%	38.2%	2.9%
	MW	48.3%	24.1%	24.1%	3.4%
	SW	34.8%	17.4%	47.8%	0.0%

School Nutrition Association

Cooperative buying of fruits and vegetables with other districts is not relatively common, cited by less than 20% of the respondents. The practice is more common among the mid-size districts (25.9% responding affirmatively) and districts in the Mideast (33.3% responding affirmatively). However, cooperative buying appears to be an increasing trend. In previously published data, cooperative buying of fresh produce was reported by 16.3% of districts in the 1996-1997 school year, and 1% in the 1983-1984 school year³. Caution must be used in the comparisons, as the current survey assessed cooperative buying of all fruits and vegetables, not solely fresh.

There are no significant differences based upon the decision-making process for ordering. As summarized in Exhibit 14, a majority — usually greater than 75% — do not engage in cooperative buying of fruits and vegetables.

Exhibit 14: Cooperative Buying of Fruits and Vegetables

		Yes	No	No response
Overall		19.5%	78.0%	2.4%
District size	Under 2,500	14.8%	82.0%	3.3%
	2,500-9,999	25.9%	72.4%	1.7%
	10,000+	18.2%	79.5%	2.3%
Region	ME	33.3%	62.5%	4.2%
	NE	21.9%	75.0%	3.1%
	SE	13.6%	86.4%	0.0%
	W/NW	14.7%	85.3%	0.0%
	MW	13.8%	82.8%	3.4%
	SW	21.7%	73.9%	4.3%
Fruit/vegetable ordering practices	Centralized	18.3%	80.3%	1.4%
	Decentralized	20.8%	75.0%	4.2%
	Both	21.2%	75.8%	3.0%

³

School Food Purchase Study: Final Report. United States Department of Agriculture. Food and Consumer Service. Office of Analysis and Evaluation. October 1998

Foodservice Management Companies

Only 11.1% of districts (18 respondents) are operated by a private management company (see Exhibit 15). Given this small number of responses, it is not possible, with any degree of statistical reliability, to explore trends based upon district size or location.

The majority of those with a foodservice management company say the company “always” has the authority to determine where the fruits and vegetables are purchased, and which specific fruits and vegetables are purchased (see Exhibit 16).

Foodservice Management Companies

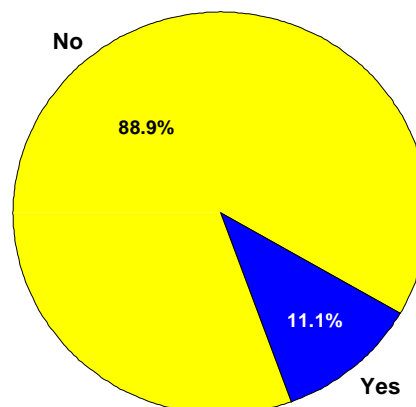


Exhibit 15

Exhibit 16: Foodservice Management Company Authority

	Yes, always	Yes, sometimes	No	No response
Does the foodservice management company determine <u>where</u> fruits/vegetables are purchased (e.g., vendor selection)?	77.8% (14)	5.6% (1)	5.6% (1)	11.1% (2)
Does the foodservice management company determine <u>which</u> fruits/vegetables are purchased?	61.1% (11)	11.1% (2)	16.7% (3)	11.1% (2)

NOTE: Data in () are the number of respondents. The total sample consists of 18 respondents.

Salad Bar Service A majority of respondents (53%) report that they offer salad bar service⁴ in at least one school in their district (see Exhibit 17). Salad bars increase in prevalence slightly as district size increases, peaking at 58.6% for mid-size districts. Far stronger variations are seen based upon region, with salad bars quite popular in the West/Northwest (76.5%) but relatively rare in the Mideast (25%). Responses by district size and region are illustrated in Exhibit 18.

Offer Salad Bar Service

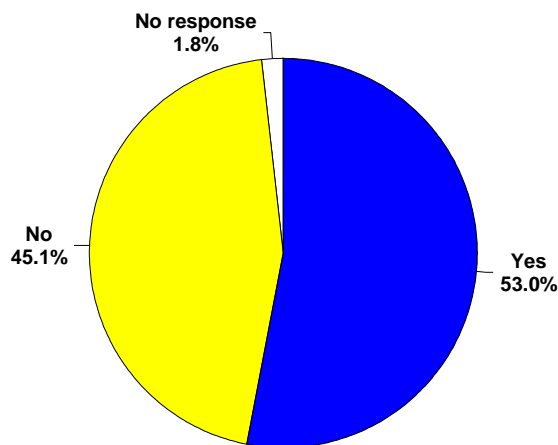


Exhibit 17

Exhibit 18: Salad Bar Service by District Size and Region

		Offer in at least one school in the district	Do not offer	No response
Overall		53.0%	45.1%	1.8%
District size	Under 2,500	47.5%	50.8%	1.6%
	2,500-9,999	58.6%	39.7%	1.7%
	10,000+	54.5%	45.5%	0.0%
Region	ME	25.0%	70.8%	4.2%
	NE	53.1%	46.9%	0.0%
	SE	54.5%	36.4%	9.1%
	W/NW	76.5%	23.5%	0.0%
	MW	55.2%	44.8%	0.0%
	SW	43.5%	56.5%	0.0%

⁴ In the survey, salad bar service was defined as applying to both reimbursable meals and a la carte service.

Those offering salad bar service typically do so every day of the week, as summarized in Exhibit 19. Salad bar service is most common in high schools, with 80.5% of those who offer salad bar service doing so in at least one high school, and 63.2% offering it daily in high schools. There are no significant differences in this pattern across segments — salad bars are typically made available five days a week in those districts that offer a salad bar, and are far more prevalent in high schools.

Exhibit 19: Frequency of Salad Bar Service

<i>{Data are days per week salad bar service is offered}</i>	One	Two	Three	Four	Five	No response or do not offer at this grade level
Elementary schools	4.6%	2.3%	2.3%	3.4%	41.4%	46.0%
Middle schools	8.0%	3.4%	2.3%	2.3%	48.3%	35.6%
High schools	8.0%	3.4%	3.4%	2.3%	63.2%	19.5%

NOTE: Percentages are based upon the 87 respondents who say they offer salad bar service in at least one school in their district.

Department of Defense Fresh Fruit and Vegetable Program The United States

Department of Agriculture has a contract with the Department of Defense (DOD)

Defense Supply Office (DSO) to provide fresh produce to agencies.

The Department of Defense Fresh

Fruit & Vegetable Program

(hereafter referred to as the “DOD Fresh Program”) is a service that allows agencies to use a portion of their group A entitlement money to purchase fresh fruits and vegetables through the regular offering process, including districts offering the National School Lunch Program.

Nearly one-half (44.6%) of the respondents report that their district participates in the DOD

Fresh Program. The most common participation method is for commodity entitlement, with only 8.5% reporting using the program for all fruit and vegetable purchases (see Exhibit 20). Note that the percentages in Exhibit 20 do not sum to 100% since a few respondents selected more than one response to describe their DOD Fresh Program participation.

Participation in the DOD Fresh Program

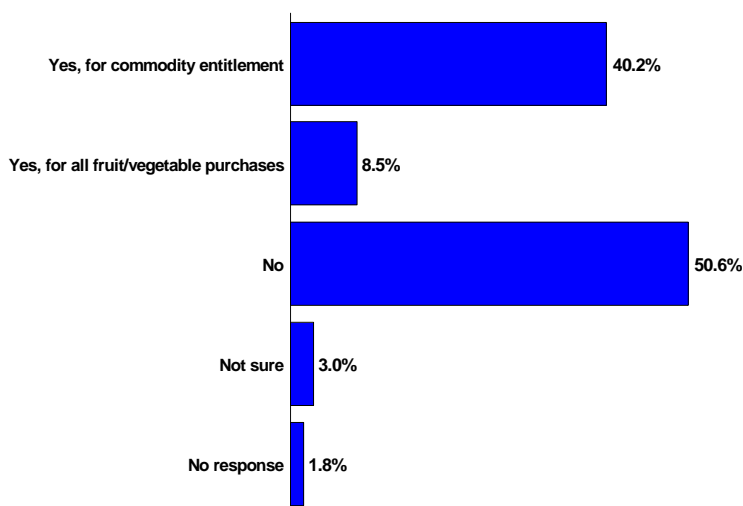


Exhibit 20

School Nutrition Association

Participation levels climb a small amount as district size increases, and peaks in popularity in the mid-size districts. The program is especially popular in the Southwest, with 56.5% of those respondents using it for commodity entitlement and 13% for all fruit and vegetable purchases. It is least popular in the Northeast, used by only 25% for commodity entitlement. There is a small increase in program usage among those who use both a centralized and decentralized ordering method. Responses by district size and region are illustrated in Exhibit 21.

Exhibit 21: DOD Fresh Program Participation by District Size and Region

		Yes, for commodity entitlement	Yes, for all fruit/vegetable purchases	No	Not sure	No response
Overall		40.2%	8.5%	50.6%	3.0%	1.8%
District size	Under 2,500	34.4%	8.2%	55.7%	4.9%	1.6%
	2,500-9,999	44.8%	10.3%	46.6%	3.4%	0.0%
	10,000+	43.2%	6.8%	50.0%	0.0%	2.3%
Region	ME	37.5%	16.7%	45.8%	4.2%	4.2%
	NE	25.0%	0.0%	65.6%	9.4%	0.0%
	SE	40.9%	0.0%	54.5%	0.0%	4.5%
	W/NW	50.0%	5.9%	47.1%	0.0%	0.0%
	MW	34.5%	17.2%	51.7%	3.4%	3.4%
	SW	56.5%	13.0%	34.8%	0.0%	0.0%
Fruit/veg etable ordering practices	Centralized	35.2%	8.5%	56.3%	2.8%	1.4%
	Decentralized	33.3%	4.2%	54.2%	8.3%	0.0%
	Both	48.5%	10.6%	43.9%	1.5%	1.5%

Apples and oranges are the most popular fruits received by districts through the DOD Fresh Program, cited by 94.3% and 84.3% respectively as one of the five most popular fruits received. Grapes are the only other fruit reported by a majority. Carrots and lettuce (the latter encompassing leaf lettuce of various types, salad mixes, and chopped salad) are the most popular vegetables, each cited by more than three quarters as one of the five most popular vegetables received. Responses are summarized in Exhibit 22 on the following page.

School Nutrition Association

Exhibit 22: Most Popular Produce from the DOD Fresh Program			
Fruits		Vegetables	
Apples	94.3%	Carrots/baby carrots/carrot sticks	83.3%
Oranges	84.3%	Lettuce/salad mix/leaf lettuce/chopped lettuce	77.3%
Grapes	57.1%	Tomatoes	50.0%
Kiwi	34.3%	Broccoli	40.9%
Pears	31.4%	Potatoes	34.8%
Strawberries	30.0%	Celery/celery sticks	34.8%
Pineapple	20.0%	Cauliflower	19.7%
Watermelon	17.1%	Onions	13.6%
Melons (type not specified)	15.7%	Cucumbers	13.6%
Cantaloupe	14.3%	Peppers	7.6%
Peaches	12.9%	Green beans	7.6%
Bananas	11.4%	Corn	6.1%
Tangerines	4.3%	Sweet potatoes	4.5%
Plums	2.9%	Avocados	4.5%
Nectarines	2.9%	Spinach	4.5%
All others	7.1%	Peas	1.5%

Data are the percentage of respondents citing the item as one of the top five fruits or vegetables their district receives through the DOD Fresh Program. A total of 70 respondents provided information on fruits; 66 provided information on vegetables. The “other” fruits consist of one mention each of blueberries, fruit mixes, cherries, lemons, and honeydew.

After School Snack Program As illustrated in Exhibit 23, about one-half (54.3%) of the respondents overall have the After School Snack Program in at least one school in their district⁵.

Program prevalence rises considerably among the largest districts, reaching 70.5%. Strong regional variations are also seen, with peak prevalence of the program seen in the Southwest and West/Northwest regions.

Nearly one-third of the respondents (31.7%) say they serve fruits and vegetables through the After School Snack Program. The remaining respondents do not (22.6%) or do not have this program (45.7%).

After School Snack Program
Are fruits/vegetables served through the After School Snack Program?

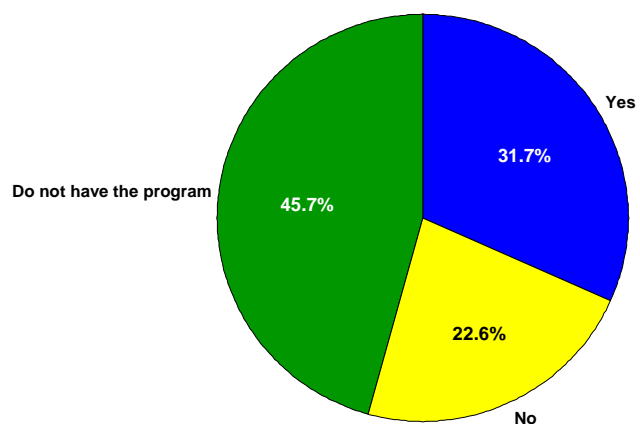


Exhibit 23

To better illustrate trends, it is helpful to segment the data into two groups:

- ▶ the percentage with the program;
- ▶ the percentage of those with the program who use it as a venue to serve fruits and vegetables.

Overall, 58.4% of those who operate the After School Snack Program serve fruits and vegetables through the program. As with overall prevalence, this percentage increases strongly with district size — only about one-third of the smaller districts with this program serve fruits and vegetables through the program versus 71% of the larger districts. Regional variations peak in the Southeast, with 92.9% of those operating the program serve fruits and vegetables as a snack.

Those who serve fruits and vegetables through the After School Snack Program typically do so two to three times per week. Once per week is the next most frequent response. Daily offerings are rare. Responses are summarized in Exhibit 24 on the following page.

⁵ This percentage differs from the number derived when respondents specify the number of schools in their district that participate in the After School Snack Program (see page 7). The source of this discrepancy is unknown, but could be due to respondents only specifying the number of schools that participate in this program if the number was known. An alternative explanation could be that some respondents checked “no” to the question on fruit/vegetable service rather than check “do not have this program.” In any case, all statistics relating to the sale of fruits/vegetables through the After School Snack Program are based strictly upon the answers to the specific question on fruit/vegetable sales.

School Nutrition Association

Exhibit 24: After School Snack Program by District Size and Region

			% of those with the program who use it to serve fruits/vegetables	Frequency of service			
				Less than once per week	Once per week	2-3 times per week	4 or more times per week
Overall		54.3%	58.4%	11.5%	32.7%	48.1%	7.7%
District size	Under 2,500	45.9%	32.1%	11.1%	44.4%	33.3%	11.1%
	2,500-9,999	50.0%	69.0%	10.0%	30.0%	60.0%	0.0%
	10,000+	70.5%	71.0%	9.1%	31.8%	45.5%	13.6%
Region	ME	41.7%	20.0%	50.0%	0.0%	0.0%	50.0%
	NE	34.4%	54.5%	0.0%	0.0%	83.3%	16.7%
	SE	63.6%	92.9%	7.7%	30.8%	53.8%	7.7%
	W/NW	70.9%	58.3%	7.1%	42.9%	42.9%	7.1%
	MW	44.8%	53.8%	28.6%	57.1%	14.3%	0.0%
	SW	73.9%	58.8%	10.0%	30.0%	60.0%	0.0%

A la Carte Service A la carte service is quite popular, offered by 83.5% of the respondents in at least one school in their district (see Exhibit 25). Overall service popularity (defined as being available in at least one school in the district) rises to over 90% among the mid-size and large districts, and is fairly consistent across all regions.

Exhibit 25: Presence of A la Carte Service in Any School in the District

		Yes	No	No response
Overall		83.5%	15.9%	0.6%
District size	Under 2,500	67.2%	31.1%	1.6%
	2,500-9,999	94.8%	5.2%	0.0%
	10,000+	90.9%	9.1%	0.0%
Region	ME	83.3%	16.7%	0.0%
	NE	90.6%	6.3%	3.1%
	SE	95.5%	4.5%	0.0%
	W/NW	79.4%	20.6%	0.0%
	MW	79.3%	20.7%	0.0%
	SW	73.9%	26.1%	0.0%

School Nutrition Association

A la carte service is, as expected, far more common in higher grade levels. The percentage of respondents offering a la carte service climbs from 54.3% for elementary schools to 79.9% for middle schools, and further up to 82.9% for high schools.

Additionally, regardless of the grade level, a la carte service is far more prevalent in the larger districts than the smaller, and peaks geographically in prevalence in the Southeast region (again regardless of grade level).

Fresh fruits and vegetables are commonly offered on a la carte lines, especially in middle and high schools. Processed fruits and vegetables are offered less than fresh, but are also readily available to students via a la carte service. These items are available to a majority of students who have access to a la carte service in virtually every segment. Elementary schools in the West/Northwest region are the exception — only 36.4% of respondents in that region with elementary school a la carte service use it to offer fresh fruits/vegetables, and only 45.4% use it to offer processed fruit/vegetables.

Results are summarized in Exhibit 26 below. It is important to note that the percentages listed for selling fresh and processed fruits/vegetables are based upon the number who offer a la carte. For example, 54.3% of the respondents have a la carte service in their elementary schools; of whom 73% sell fresh fruits/vegetables and 69.7% sell processed fruits/vegetables on their a la carte lines.

Exhibit 26: A la Carte Service by Grade, District Size and Region				
		% with a la carte service	% of those with a la carte service who use it to offer fresh fruits and vegetables	% who have a la carte and offer processed fruits and vegetables
Elementary schools	Overall	54.3%	73.0%	69.7%
	District size	Under 2,500	37.7%	78.3%
		2,500-9,999	63.8%	70.3%
		10,000+	65.9%	72.4%
	Region	ME	54.3%	69.2%
		NE	65.6%	95.2%
		SE	86.4%	73.7%
		W/NW	32.4%	36.4%
		MW	48.3%	64.3%
		SW	47.8%	81.8%

Table continued on the following page

School Nutrition Association

Exhibit 26: A la Carte Service by Grade, District Size and Region

		% with a la carte service	% of those with a la carte service who use it to offer fresh fruits and vegetables	% who have a la carte and offer processed fruits and vegetables
Middle schools	Overall	79.9%	84.0%	71.0%
	District size	Under 2,500	60.7%	75.7%
		2,500-9,999	93.1%	88.9%
		10,000+	90.9%	85.0%
	Region	ME	83.3%	85.0%
		NE	81.3%	88.5%
		SE	90.9%	90.0%
		W/NW	76.5%	76.9%
		MW	75.9%	81.8%
		SW	73.9%	82.4%
High schools	Overall	82.9%	91.9%	77.9%
	District size	Under 2,500	65.6%	95.0%
		2,500-9,999	94.8%	92.7%
		10,000+	90.9%	90.0%
	Region	ME	79.2%	89.5%
		NE	90.6%	100.0%
		SE	95.5%	85.7%
		W/NW	79.4%	92.6%
		MW	79.3%	95.7%
		SW	73.9%	82.4%

Vending Service Student-accessible vending machines are available, to some extent, in nearly 85% of the districts. As summarized in Exhibit 27, vending machine service increases in prevalence with district size, with more than 93% of the larger districts saying that vending machine service is available in at least one school in their district. As with a la carte service, the responses spike in the Southeast region, with 100% of those respondents saying vending machines are available in at least one school in their district.

Exhibit 27: Presence of Vending Service in Any School in the District

		Yes	No	No response
Overall		84.1%	15.2%	0.6%
District size	Under 2,500	68.9%	29.5%	1.6%
	2,500-9,999	93.1%	6.9%	0.0%
	10,000+	93.2%	6.8%	0.0%
Region	ME	87.5%	12.5%	0.0%
	NE	78.1%	18.8%	3.1%
	SE	100.0%	0.0%	0.0%
	W/NW	70.6%	29.4%	0.0%
	MW	82.8%	17.2%	0.0%
	SW	95.7%	4.3%	0.0%

As seen with a la carte service, vending service increases significantly in prevalence in the upper grades — only 38.4% report having student accessible vending machines in their elementary schools, but 76.2% report having them in middle schools and 84.1% in high schools. The latter statistic is important to note since it signifies that every district that reports having student-accessible vending machines has at least one of those machines in a high school.

Full-strength (100%) juice is commonly offered in vending machines that are located in middle and high schools. These juices are especially popular in high schools, with 75.4% of those with high school vending machines noting that they offer 100% juice in vending machines. Elementary schools lag, with only roughly one-third of those with vending machines offering 100% juice.

The sale of fresh fruits and vegetables through vending is quite rare. None of the respondents report selling these items in their elementary and middle school vending machines, and only 2.2% report selling them in their high school vending machines. A similar picture is seen regarding processed fruits and vegetables, with less than three percent selling them via vending at any grade level.

School Nutrition Association

Responses by district size and region are illustrated in Exhibit 28 beginning below. It is important to note that the percentages listed for selling juice and fruits/vegetables are based upon the number who offer vending service. For example, 38.4% of the respondents have vending service in their elementary schools; 34.9% of whom offer 100% juice. None offer fresh fruits/vegetables, and 1.6% offer processed fruits/vegetables through those vending machines.

Exhibit 28: Vending Service by Grade, District Size and Region					
		% with a vending service	% of those who have vending and offer 100% juice	% of those who have vending and offer fresh fruits and vegetables	% of those who have vending and offer processed fruits and vegetables
Elementary schools	Overall	38.4%	34.9%	0.0%	1.6%
	District size	Under 2,500	32.8%	20.0%	0.0%
		2,500-9,999	44.8%	38.5%	0.0%
		10,000+	38.6%	47.1%	0.0%
	Region	ME	54.2%	46.2%	0.0%
		NE	34.4%	36.4%	0.0%
		SE	40.9%	33.3%	0.0%
		W/NW	26.5%	33.3%	0.0%
		MW	34.5%	20.0%	0.0%
		SW	47.8%	36.4%	0.0%
Middle schools	Overall	76.2%	64.0%	0.0%	1.6%
	District size	Under 2,500	62.3%	55.3%	0.0%
		2,500-9,999	82.8%	66.7%	0.0%
		10,000+	88.6%	69.2%	0.0%
	Region	ME	83.3%	55.0%	0.0%
		NE	75.0%	83.3%	0.0%
		SE	81.8%	55.6%	0.0%
		W/NW	58.8%	50.0%	0.0%
		MW	72.4%	81.0%	0.0%
		SW	95.7%	54.5%	0.0%

Table continued on the following page

School Nutrition Association

Exhibit 28: Vending Service by Grade, District Size and Region

			% with a vending service	% of those who have vending and offer 100% juice	% of those who have vending and offer fresh fruits and vegetables	% of those who have vending and offer processed fruits and vegetables
High schools	Overall	84.1%	75.4%	2.2%	2.9%	
	District size	Under 2,500	68.9%	64.3%	0.0%	2.4%
		2,500-9,999	93.1%	79.6%	5.6%	3.7%
		10,000+	93.2%	80.5%	0.0%	2.4%
	Region	ME	87.5%	76.2%	0.0%	4.8%
		NE	78.1%	76.0%	8.0%	8.0%
		SE	100.0%	68.2%	0.0%	0.0%
		W/NW	70.6%	70.8%	0.0%	4.2%
		MW	82.8%	91.7%	0.0%	0.0%
		SW	95.7%	68.2%	4.5%	0.0%

C. Fruit and Vegetable Procurement Practices

Overview A large portion of the survey was dedicated to collecting data on the specific amounts of fruits and vegetables obtained by school districts. Ten specific categories were explored:

- ▶ fresh fruit;
- ▶ fresh vegetables;
- ▶ frozen fruit;
- ▶ frozen vegetables;
- ▶ frozen juice;
- ▶ canned fruit;
- ▶ canned vegetables;
- ▶ canned juice/bulk juice portioned;
- ▶ dried fruit;
- ▶ dried vegetables.

For each of the ten categories, respondents were asked to provide total volume (expressed as pounds for the fresh items and number of cases for the frozen, canned, or dried items) and dollar amount. The volume and dollar amount were also divided by procurement source, with data requested for items received from the federal commodity program as well as items received from all other sources (such as private vendors, grocery stores, etc.).

Collectively, these data can build a comprehensive picture of the volume and sources for all fresh, frozen, canned, and dried fruits and vegetables used in school foodservice. However, most respondents could not provide full and complete data for all items. For example, some could provide information only for commodity purchases; some could provide information only for non-commodity purchases; some could provide only aggregate dollar amounts, etc. A significant number left the entire question blank, often citing that these data were not available, or could not be made available in a timely fashion. Thus, the data collected does not reflect the full scope of the 164 respondents, but rather a far smaller subset of districts.

The sample collected is not sufficiently large to support a significant level of segmentation. Thus, many of the tables in this report section provide overall data only — there are too few responses to examine trends based upon district size or region. Segmentation is possible for some aggregate numbers and has been included, based on district size only, whenever statistically feasible. Regardless if the data are segmented or not, it is critically important to note the sample size for any given line item to ensure the results are interpreted properly. Given the small sample size, medians are used more often than averages since the median is less affected by outlier data (please refer to page 2 of this report for additional details on the usage of means and averages).

The data are presented as aggregate totals within some tables. For example, the volume and dollar amount of fresh fruit and fresh vegetables are combined into a category entitled “all fresh fruits/vegetables.” In most cases, this sum is computed from the respective supporting line items. However, in a few cases, the survey respondents provided only the combined information. Thus, the number of responses for the combined data will not always sum to the number of responses of the corresponding line items.

To provide a more focused and clear presentation, only data in summary form are presented in this section. A complete set of detailed tables is provided in Appendix A. To ensure the data are properly interpreted, it is highly recommended that the detailed tables be examined in addition to these summary tables.

Overall Volume Overall, district directors reported ordering significantly more fresh produce from the open market than the federal commodity program. The typical respondent reports purchasing a total of 1,584 pounds of fresh fruit and 2,910 pounds of fresh vegetables from the federal commodity program. Procurement from the open market is considerably higher, with respondents reporting a median of 7,789 pounds of fresh fruit and 7,200 pounds of fresh vegetables. This trend toward ordering more from the open market versus the federal commodity program holds true for all types of fruits and vegetables examined except for dried fruit, as summarized in Exhibit 29 below. More detailed breakouts are provided in Appendix A.

Exhibit 29: Fruit and Vegetable Procurement Volume by Commodity and Other Sources (in Pounds or Cases)

	From federal commodity program		From all other sources	
	Median	Number of responses	Median	Number of responses
Fresh fruit (pounds)	1,584	43	7,789	50
Fresh vegetables (pounds)	2,910	25	7,200	49
Frozen fruit (cases)	63	78	82	24
Frozen vegetables (cases)	200	85	800	61
Frozen juice (cases)	65	60	537	48
Canned fruit (cases)	347	94	378	64
Canned vegetables (cases)	200	88	409	62
Canned juice/bulk juice portioned (cases)	43	16	360	25
Dried fruit (cases)	50	65	36	11
Dried vegetables (cases)	38	4	355	15

The data reported in this table excludes those who reported zero amounts purchased or who left the question blank.

School Nutrition Association

Similarly, significantly more dollar amounts are spent on fruits and vegetables from sources other than the federal commodity program (see Exhibit 30). Note the small sample size for some items, especially dried vegetables. Although the median amount reported is quite high, only 13 respondents provided information. Thus, the data are heavily influenced by a few large districts, whereas the larger sample size for the other items allows for the moderating influence of the smaller districts. More detailed breakouts are provided in Appendix A.

Exhibit 30: Fruit and Vegetable Dollar Value by Commodity and Other Sources

	From federal commodity program		From all other sources	
	Median	Number of responses	Median	Number of responses
Fresh fruit (pounds)	\$1,365	53	\$6,893	60
Fresh vegetables (pounds)	\$2,345	32	\$9,000	61
Frozen fruit (cases)	\$960	73	\$932	24
Frozen vegetables (cases)	\$2,442	81	\$11,585	59
Frozen juice (cases)	\$549	52	\$5,400	43
Canned fruit (cases)	\$5,928	86	\$9,000	61
Canned vegetables (cases)	\$2,355	78	\$5,920	60
Canned juice/bulk juice portioned (cases)	\$468	13	\$1,620	25
Dried fruit (cases)	\$693	60	\$979	10
Dried vegetables (cases)	**	2	\$17,127	13

** = insufficient data for tabulation. The data reported in this table excludes those who reported zero amounts purchased or who left the question blank.

School Nutrition Association

Grouping items together shows the pattern of increased expenditures from sources other than the federal commodity program. For example, respondents report purchasing a median total of \$4,705 of fresh fruits/vegetables from the federal commodity program, and \$18,950 from all other sources. Note the significant difference between the median and average values, indicating the great diversity of responses provided. More detailed breakouts are provided in Appendix A.

It is important to note the following when interpreting the totals listed in Exhibit 31:

- ▶ some respondents provided only total amounts (i.e., they listed only the total amount spent on fresh fruits/vegetables rather than specify the amount spent on fruit versus the amount spent on vegetables). Thus, the sample size for the subtotal data will not match the sample size for the associated line items;
- ▶ all sums were calculated independently for each respondent. Blank responses were interpreted as zeros for purposes of creating a subtotal. For example, if a respondent listed \$1,000 as the total spent on fresh fruit and left the amount spent on fresh vegetables blank, it was assumed that nothing was spent on fresh vegetables. Thus, the total spent on fresh items for that respondent would be recorded as \$1,000.

Exhibit 31: Overall Dollar Value by Fresh, Frozen, Canned and Dried

		Median	Average	Number of responses
Fresh	From federal commodity program	\$4,705	\$29,893	69
	From all other sources	\$18,950	\$98,383	72
Frozen	From federal commodity program	\$4,153	\$13,326	87
	From all other sources	\$19,153	\$114,051	61
Canned	From federal commodity program	\$8,415	\$38,231	86
	From all other sources	\$16,731	\$71,181	67
Dried	From federal commodity program	\$748	\$3,387	61
	From all other sources	\$6,418	\$17,431	18

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Segmenting responses by district size shows the amount spent rising proportionally with increased enrollment. In every case, the amount spent from other sources exceeds the amount spent through the federal commodity program, often by a wide margin. Note, however, the small sample sizes for some line items in Exhibit 32. This small sample size may be an influencing factor in the data distribution.

Exhibit 32: Overall Dollar Value by District Size

		Under 2,500		2,500-9,999		10,000+	
		Median	Sample size	Median	Sample size	Median	Sample size
Fresh	Federal commodity program	\$411	18	\$6,481	26	\$57,248	24
	All other sources	\$6,037	24	\$17,392	23	\$215,350	24
Frozen	Federal commodity program	\$1,036	32	\$4,249	28	\$26,064	27
	All other sources	\$4,722	17	\$11,693	23	\$153,665	21
Canned	Federal commodity program	\$1,672	29	\$7,975	30	\$53,410	27
	All other sources	\$3,577	19	\$13,280	25	\$114,811	23
Dried	Federal commodity program	\$228	19	\$639	21	\$5,279	21
	All other sources	**	2	**	3	\$18,099	13

** = insufficient data for tabulation

Item Appropriation by Source The largest proportion of commodity program expenditures are spent on canned fruits and vegetables. In contrast, the largest proportion of open market expenditures are spent on fresh produce. As summarized in Exhibit 33, respondents spent an average of 45.6% of their total federal commodity purchases on canned items, with the balance about equally divided between fresh and frozen items. In contrast, an average of 45.7% of the non-commodity spending was on fresh items. Dried items represent the smallest level of expenditure regardless of purchase source. More detailed breakouts are provided in Appendix A.

Percentage of Expenditures

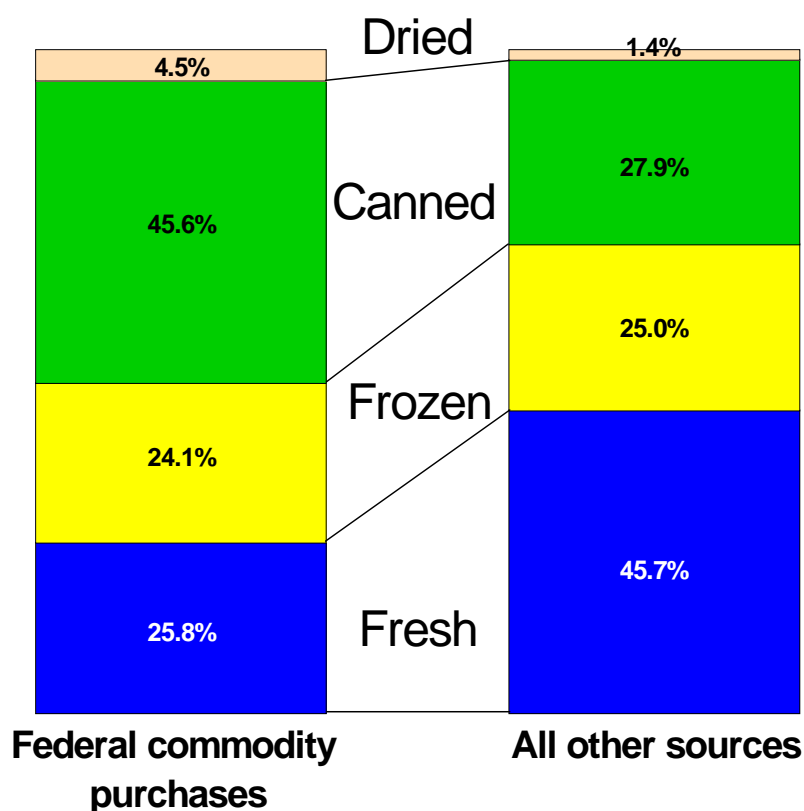


Exhibit 33

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Grouping all purchases together, regardless of source, shows that on average respondents dedicate slightly more money to fresh fruits/vegetable purchases. As summarized in Exhibit 34, 37.3% of all monies spent, regardless of source, were spent on fresh items. This is followed closely by canned items (average of 35.3%). Frozen items trail, accounting for an average of 25.4% of total expenditures. Very little is dedicated to purchasing dried items.

As with the previous table, percentages were calculated independently for each respondent, and zeros were inferred for missing data.

Exhibit 34: Percentage of Expenditures by Commodity and Other Sources

		Items obtained through the federal commodity program	Items obtained through all other sources		Total	
		Average % of total federal commodity procurement	Number of responses	Average % of total other source procurement	Number of responses	Average % of total procurement
All fresh items	25.8%	105	81	45.7%	108	37.3%
All frozen items	24.1%			25.0%		25.4%
All canned items	45.6%			27.9%		35.3%
All dried items	4.5%			1.4%		2.0%
Total expenditures	100%			100%		100%

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Examining the data by district size shows that, regardless of size, respondents spend the greatest proportion of funds through the federal commodity program on canned items. In contrast, the greatest percentage of funds spent through other sources is dedicated to fresh items, especially in the smaller districts. Examining total expenditures regardless of source shows a close division between fresh and canned items, with canned items more popular in the small and medium size districts, and fresh items more popular in the largest districts.

Responses are summarized in Exhibit 35.

Exhibit 35: Percentage of Expenditures by District Size						
		Under 2,500		2,500-9,999		10,000+
		Average	Num. resp.	Average	Num. resp.	Average Num. resp.
From federal commodity program	Fresh	15.3%	37	30.6%	33	30.5%
	Frozen	30.4%		21.5%		20.6%
	Canned	48.0%		44.5%		45.1%
	Dried	6.4%		3.4%		3.7%
From all other sources	Fresh	50.5%	26	39.2%	27	45.5%
	Frozen	22.8%		24.4%		28.8%
	Canned	25.6%		36.2%		23.0%
	Dried	1.2%		0.2%		2.7%
Grand total	Fresh	33.7%	38	35.9%	34	40.6%
	Frozen	26.9%		22.8%		27.1%
	Canned	36.9%		39.9%		30.0%
	Dried	2.5%		1.4%		2.2%

D. Overall Food Procurement Practices

Total Expenditures Respondents were asked to report the total Fair Market Value⁶ (FMV) of all food items obtained through the commodity program, and the overall total food expenditures obtained through all sources. Survey respondents report that the total FMV of commodity procurement for all food categories is a median of \$62,612. Total food expenditures for all food categories is a median of \$543,251. As illustrated in Exhibit 36, the data have a very large scope — commodity procurement values range from \$2,311 to \$2.18 million; total food expenditures range from \$1,045 to \$134 million.

Exhibit 36: Total Food Expenditures by Commodity and Overall Procurement

	10 th percentile	25 th percentile	50 th percentile (median)	75 th percentile	90 th percentile	Number of responses
Total Fair Market Value of commodity procurement for all food categories	\$8,690	\$25,218	\$62,612	\$214,676	\$547,232	108
Total food expenditures for all food categories	\$75,000	\$191,356	\$543,251	\$1,785,251	\$5,354,698	114

Values for commodity procurement and total food expenditures rise proportionally by district size, as summarized in Exhibit 37 below.

Exhibit 37: Total Commodity and Food Expenditures by District Size

		Total Fair Market Value of commodity procurement for all food categories		Total food expenditures for all food categories	
		Median	Number of responses	Median	Number of responses
Overall		\$62,612	108	\$543,251	114
District size	Under 2,500	\$18,580	35	\$137,033	34
	2,500-9,999	\$69,099	37	\$515,927	42
	10,000+	\$363,104	35	\$2,650,000	37

⁶ Fair Market Value (FMV): Fair Market Value is the price assigned to each commodity made available through the Commodity Distribution Program for the purpose of calculating a school's commodity entitlement utilization. If a district requests 10 cases of product X with an FMV of \$13/case, the district's entitlement is charged \$130.

In addition to the actual amount spent, it is helpful to examine the proportion of the district's total food expenditures allocated to total commodity procurement, fruits and vegetables through the federal commodity program, and fruits and vegetables through all other sources. Expressing the data as a ratio facilitates comparing different size districts, since the ratio normalizes the data.

All Commodity Products Overall, respondents report that the total Fair Market Value (FMV) of commodity procurement represents a median of 13.3% of their total food expenditures. In other words, the typical district reports allocating 13.3% of their total food expenditures on commodity procurement (see Exhibit 38).

Exhibit 38: Percentage of Total Food Expenditures Spent on All Commodity Items

	10 th percentile	25 th percentile	50 th percentile (median)	75 th percentile	90 th percentile	Number of responses
Total Fair Market Value of all commodity procurement as a percentage of total food expenditures	5.8%	10.3%	13.3%	17.1%	24.5%	100

Examining this ratio by district size shows no major variations for the total FMV of commodity procurement as a percentage of total food expenditures. Median responses range from roughly 13% to 14%. In other words, the typical district, irrespective of size, reports that the FMV of all commodity procurement represents about 13% to 14% of their total food expenditures (see Exhibit 39).

Exhibit 39: Percentage of Total Food Expenditures Spent on All Commodity Items by District Size

	Under 2,500		2,500-9,999		10,000+	
	Median ratio	Num. responses	Median ratio	Num. responses	Median ratio	Num. responses
Total Fair Market Value of all commodity procurement as a percentage of total food expenditures	14.0%	28	12.6%	36	13.1%	35

Fruit and Vegetable Products The total amount of fruits and vegetables ordered through the federal commodity program represents a median of only 3.8% of total food expenditures. Fruit and vegetable expenditures through other sources are considerably higher, reaching a median of 11.8% of total food expenditures. In other words, the typical district reports allocating only 3.8% of their total food expenditures on fruits and vegetables through the federal commodity program, and 11.8% on fruits and vegetables through all other sources (see Exhibit 40).

Exhibit 40: Percentage of Total Food Expenditures Spent on Fruits and Vegetables

	10 th percentile	25 th percentile	50 th percentile (median)	75 th percentile	90 th percentile	Number of responses
Total amount spent on fruits and vegetables through the federal commodity program as a percentage of total food expenditures	1.1%	2.1%	3.8%	5.3%	9.2%	92
Total amount spent on fruits and vegetables through all other sources as a percentage of total food expenditures	2.9%	6.1%	11.8%	17.9%	36.3%	73

Responses are also consistent across district size categories when the total amount spent on fruits and vegetables obtained through the federal commodity program is expressed as a percentage of total food expenditures. Responses vary within a narrow range: the small districts spent a median of 4.2%; the medium and larger districts spent 3.6%.

The trend of spending far more on fruits and vegetables obtained through sources other than the federal commodity program is clearly seen across all district sizes. The amount spent on these items through other sources (such as private vendors, grocery stores, etc.), as a percentage of total food expenditures, is typically three times as much as the amount spent through the federal commodity program (see Exhibit 41).

Exhibit 41: Percentage of Total Food Expenditures Spent on Fruits and Vegetables by District Size

	Under 2,500		2,500-9,999		10,000+	
	Median ratio	Num. responses	Median ratio	Num. responses	Median ratio	Num. responses
Total amount spent on fruits and vegetables through the federal commodity program as a percentage of total food expenditures	4.2%	28	3.6%	30	3.6%	33
Total amount spent on fruits and vegetables through all other sources as a percentage of total food expenditures	12.6%	22	10.0%	25	13.5%	25

E. Factors Influencing Fruit and Vegetable Procurement

Influencing Factors An increase in student demand, a decrease in cost, and an increase in the amount of reimbursable funding are the primary factors identified by the survey respondents as important in their district's decision to order a larger quantity of fresh fruits and vegetables. As summarized in Exhibit 42 below, each of these factors is rated highly important by a sizeable majority of respondents. Of far lesser importance is a change in serving size meal requirements. This latter factor is rated as highly important by only 47.6%, and a sizeable number (17.7%) say it carries only low importance as an influencing factor.

Exhibit 42: Factors Influencing Fruit and Vegetable Procurement

	Low importance	Moderate importance	High importance	No opinion/response
An increase in student demands/preferences	1.8%	8.5%	84.1%	5.5%
A decrease in cost	3.7%	14.0%	76.8%	5.5%
An increase in the amount of reimbursable funding	1.8%	9.1%	82.3%	6.7%
A change in serving size meal requirements	17.7%	23.2%	47.6%	11.6%

There are no significant differences across most segments concerning the overall pattern illustrated above. A strong majority in all segments — sometimes as much as 100% — feel the most significant factors are an increase in student demands/preferences, a decrease in cost, and an increase in the amount of reimbursable funding. There are some variations based upon changes in serving size meal requirements. The larger districts appear to place more importance on this factor than the smaller, but this conclusion may be impacted by the fact that 23% of the smaller districts have no opinion regarding this factor. While there is a spike of perceived importance among those in the Southeast, all other segments rate this factor far below the primary three.

Responses by district size and region are illustrated in Exhibit 43 beginning on the following page.

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Exhibit 43: Factors by District Size and Region

		An increase in student demands/preferences			
		Low importance	Moderate importance	High importance	No opinion/response
Overall		1.8%	8.5%	84.1%	5.5%
District size	Under 2,500	1.6%	6.6%	78.7%	13.1%
	2,500-9,999	1.7%	6.9%	89.7%	1.7%
	10,000+	2.3%	13.6%	84.1%	0.0%
Region	ME	0.0%	0.0%	100.0%	0.0%
	NE	0.0%	6.3%	84.4%	9.4%
	SE	4.5%	4.5%	90.9%	0.0%
	W/NW	2.9%	11.8%	79.4%	5.9%
	MW	3.4%	13.8%	72.4%	10.3%
	SW	0.0%	13.0%	82.6%	4.3%
		A decrease in cost			
		Low importance	Moderate importance	High importance	No opinion/response
Overall		3.7%	14.0%	76.8%	5.5%
District size	Under 2,500	0.0%	9.8%	78.7%	11.5%
	2,500-9,999	5.2%	13.8%	77.6%	3.4%
	10,000+	4.5%	20.5%	75.0%	0.0%
Region	ME	0.0%	12.5%	87.5%	0.0%
	NE	0.0%	12.5%	78.1%	9.4%
	SE	9.1%	9.1%	81.8%	0.0%
	W/NW	2.9%	20.6%	73.5%	2.9%
	MW	6.9%	10.3%	69.0%	13.8%
	SW	4.3%	17.4%	73.9%	4.3%

Table continued on the following page

Exhibit 43: Factors by District Size and Region

		An increase in the amount of reimbursable funding			
		Low importance	Moderate importance	High importance	No opinion/response
Overall		1.8%	9.1%	82.3%	6.7%
District size	Under 2,500	1.6%	6.6%	78.7%	13.1%
	2,500-9,999	0.0%	13.8%	82.8%	3.4%
	10,000+	2.3%	6.8%	88.6%	2.3%
Region	ME	4.2%	4.2%	87.5%	4.2%
	NE	3.1%	0.0%	87.5%	9.4%
	SE	4.5%	4.5%	90.9%	0.0%
	W/NW	0.0%	26.5%	70.6%	2.9%
	MW	0.0%	13.8%	72.4%	13.8%
	SW	0.0%	0.0%	91.3%	8.7%
		A change in serving size meal requirements			
		Low importance	Moderate importance	High importance	No opinion/response
Overall		17.7%	23.2%	47.6%	11.6%
District size	Under 2,500	21.3%	19.7%	36.1%	23.0%
	2,500-9,999	13.8%	24.1%	56.9%	5.2%
	10,000+	18.2%	27.3%	50.0%	4.5%
Region	ME	29.2%	20.8%	45.8%	4.2%
	NE	15.6%	21.9%	43.8%	18.8%
	SE	9.1%	18.2%	72.7%	0.0%
	W/NW	14.7%	26.5%	47.1%	11.8%
	MW	24.1%	20.7%	41.4%	13.8%
	SW	13.0%	30.4%	39.1%	17.4%

In addition to rating specific factors, respondents were invited to describe any additional factors that would encourage their district to order more fresh fruits and vegetables. Only 58 respondents provided input, with the need for increased funding being the most popular theme. Other major themes include:

- ▶ access to additional labor for processing;
- ▶ increased availability, especially on a regular basis so the items could be incorporated into menu planning;
- ▶ better quality/longer shelf life for items;
- ▶ better variety of items available;
- ▶ improved storage facilities;
- ▶ better portion allotments for pre-packed items.

A full list of comments is provided in Appendix B.

Appendix A: Statistical Tables

Exhibit 44: Overall Volume from the Federal Commodity Program

	10 th percentile	25 th percentile	50 th percentile (median)	75 th percentile	90 th percentile	Number of responses
Fresh fruit (pounds)	104	360	1,584	12,420	42,763	43
Fresh vegetables (pounds)	260	450	2,910	10,494	63,284	25
Frozen fruit (cases)	8	20	63	206	754	78
Frozen vegetables (cases)	11	50	200	529	2,344	85
Frozen juice (cases)	10	23	65	165	871	60
Canned fruit (cases)	52	175	347	1,202	5,155	94
Canned vegetables (cases)	21	66	200	603	1,929	88
Canned juice/bulk juice portioned (cases)	5	22	43	269	3,200	16
Dried fruit (cases)	5	14	50	129	591	65
Dried vegetables (cases)	**	**	38	**	**	4

** = insufficient data to provide a full percentile suite

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Exhibit 45: Overall Dollar Value from the Federal Commodity Program

	10 th percentile	25 th percentile	50 th percentile (median)	75 th percentile	90 th percentile	Number of responses
Fresh fruit	\$112	\$336	\$1,365	\$6,273	\$32,014	53
Fresh vegetables	\$299	\$1,000	\$2,345	\$8,550	\$57,213	32
Frozen fruit	\$115	\$343	\$960	\$3,962	\$16,982	73
Frozen vegetables	\$117	\$580	\$2,442	\$7,038	\$26,828	81
Frozen juice	\$86	\$161	\$549	\$1,419	\$5,319	52
Canned fruit	\$556	\$1,698	\$5,928	\$18,094	\$80,422	86
Canned vegetables	\$158	\$751	\$2,355	\$8,914	\$37,587	78
Canned juice/bulk juice portioned	\$37	\$184	\$468	\$2,778	\$42,760	13
Dried fruit	\$45	\$237	\$693	\$3,149	\$8,589	60
Dried vegetables	**	**	**	**	**	2

** = insufficient data for analysis.

Exhibit 46: Overall Volume from All Other Sources

	10 th percentile	25 th percentile	50 th percentile (median)	75 th percentile	90 th percentile	Number of responses
Fresh fruit (pounds)	429	1,330	7,789	32,625	260,408	50
Fresh vegetables (pounds)	650	1,660	7,200	52,185	192,535	49
Frozen fruit (cases)	4	10	82	346	1,972	24
Frozen vegetables (cases)	35	87	800	2,652	10,974	61
Frozen juice (cases)	18	111	537	4,065	25,686	48
Canned fruit (cases)	24	80	378	1,881	5,446	64
Canned vegetables (cases)	20	82	409	2,022	5,508	62
Canned juice/bulk juice portioned (cases)	4	50	360	760	47,150	25
Dried fruit (cases)	3	12	36	100	288	11
Dried vegetables (cases)	2	4	355	1,345	2,080	15

Exhibit 47: Overall Dollar Value from All Other Sources

	10 th percentile	25 th percentile	50 th percentile (median)	75 th percentile	90 th percentile	Number of responses
Fresh fruit	\$732	\$2,203	\$6,893	\$32,618	\$134,654	60
Fresh vegetables	\$1,000	\$1,950	\$9,000	\$40,092	\$192,815	61
Frozen fruit	\$79	\$187	\$932	\$4,553	\$32,107	24
Frozen vegetables	\$552	\$1,500	\$11,585	\$44,202	\$161,500	59
Frozen juice	\$198	\$1,000	\$5,400	\$57,637	\$290,866	43
Canned fruit	\$470	\$2,262	\$9,000	\$32,064	\$105,450	61
Canned vegetables	\$403	\$1,743	\$5,920	\$34,824	\$97,835	60
Canned juice/bulk juice portioned	\$113	\$650	\$1,620	\$8,942	\$201,470	25
Dried fruit	\$67	\$226	\$979	\$2,966	\$9,154	10
Dried vegetables	\$74	\$2,400	\$17,127	\$48,532	\$56,076	13

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Exhibit 48: Combined Dollar Value

		10 th percentile	25 th percentile	50 th percentile (median)	75 th percentile	90 th percentile	Number of responses
Fresh	From federal commodity program	\$125	\$648	\$4,705	\$26,615	\$85,000	69
	From all other sources	\$2,113	\$6,943	\$18,950	\$100,808	\$308,202	72
	All fresh items	\$562	\$3,816	\$16,955	\$87,918	\$325,510	94
Frozen	From federal commodity program	\$410	\$1,184	\$4,153	\$12,092	\$44,362	87
	From all other sources	\$944	\$4,768	\$19,153	\$96,950	\$312,690	61
	All frozen items	\$1,021	\$3,598	\$10,200	\$52,909	\$205,174	91
Canned	From federal commodity program	\$898	\$3,372	\$8,415	\$33,200	\$122,954	86
	From all other sources	\$1,360	\$4,868	\$16,731	\$66,277	\$280,848	67
	All canned items	\$1,691	\$6,119	\$19,368	\$69,746	\$304,052	92
Dried	From federal commodity program	\$46	\$246	\$748	\$3,027	\$8,914	61
	From all other sources	\$103	\$869	\$6,418	\$32,452	\$55,746	18
	All dried items	\$98	\$284	\$893	\$5,261	\$29,913	64

NOTE: All values in the table are computed independently based upon the total data provided by respondents (see explanation on page 32). This, plus the fact that the data are expressed as percentiles rather than averages (see explanation on pages 2-3) means that, by design, the shaded subtotals will not sum to their respective components.

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Exhibit 49: Dollar Amounts as a Percentage of Total Purchases

	10 th percentile	25 th percentile	50 th percentile (median)	75 th percentile	90 th percentile	Average	Number of responses
All fresh items	0.0%	13.4%	31.0%	52.7%	100.0%	37.3%	108
All frozen items	0.0%	9.1%	21.5%	37.2%	54.3%	25.4%	108
All canned items	0.0%	17.1%	33.5%	51.3%	70.9%	35.3%	108
All dried items	0.0%	0.0%	0.4%	1.8%	6.2%	2.0%	108
All items purchased through the federal commodity program	8.0%	14.4%	31.6%	97.2%	100.0%	45.8%	108
All items purchased through all other sources	0.0%	2.8%	68.5%	85.7%	92.0%	54.2%	108

NOTE: Data are expressed as the percentage of dollars spent on items purchased through the federal commodity program and all other source. Zeros are inferred for missing responses.

Exhibit 50: Dollar Amounts as a Percentage of Commodity Purchases

	10 th percentile	25 th percentile	50 th percentile (median)	75 th percentile	90 th percentile	Average	Number of responses
All fresh items	0.0%	0.0%	5.0%	40.6%	100.0%	25.8%	105
All frozen items	0.0%	9.4%	20.0%	35.3%	55.8%	24.1%	105
All canned items	0.0%	29.2%	45.7%	70.5%	83.2%	45.6%	105
All dried items	0.0%	0.0%	0.9%	4.4%	13.2%	4.5%	105

NOTE: Data are expressed as the percentage of dollars spent on items purchased through the federal commodity program.

Exhibit 51: Dollar Amounts as a Percentage of All Other Purchases

	10 th percentile	25 th percentile	50 th percentile (median)	75 th percentile	90 th percentile	Average	Number of responses
All fresh items	0.0%	21.0%	42.2%	69.0%	100.0%	45.7%	81
All frozen items	0.0%	1.4%	19.3%	38.9%	58.8%	25.0%	81
All canned items	0.0%	10.1%	21.2%	41.8%	60.6%	27.9%	81
All dried items	0.0%	0.0%	0.0%	0.0%	4.4%	1.4%	81

NOTE: Data are expressed as the percentage of dollars spent on items purchased through sources other than the federal commodity program.

Appendix B: Full-Text Comments

Question 24: Please describe any additional factors that would encourage your district to order more fresh fruits and vegetables:

A change in the after school snack portion. 6 oz juice is expensive or 3/4 cup of fresh vegetables may be too large for a student to consume at a program.

A county wide school co-op is under discussion and may enable us to order more.

Ability to use DOD commodity funds to buy locally.

Additional funding to purchase more fresh fruit and vegetables. If no funding, have USDA purchase more.

Additional labor to process.

Anything from the government on assistance in purchasing fresh produce. Also, equipment to cut fruit into wedges.

As childhood obesity increases schools are looked on as educators of nutrition. Because fresh fruits/vegetables are expensive they are often overlooked. We need less costly foods to give to kids to offset diabetes.

Availability and lower prices.

Availability so that it could be menued more often. Would really like to see our kids get grapes, apple slices.

Availability, choices.

Availability during winter months at reasonable prices and good quality.

Availability year round and the cost to those items. Strawberries/blueberries available frozen from USDA. Pineapple was not available for me in cans.

B, C and D would allow us to offer a greater variety of fruits and vegetables but not necessarily larger quantity.

Better quality (bananas).

Bonus not against entitlement dollars.

Consumption of these items has increased and there is less waste compared to processed items. However, these items are sometimes 2-3 times more costly.

Cost is a very big issue.

Customer demand

Cutting fat. Decrease sweet desserts. Healthy choices.

Expansion of DOD approved suppliers. Packaged fruit/veg are popular but costly. Unable to return poor quality DOD items - quality was a problem (shelf life).

Extra funding and educational material that can be used at the school site.

Having easier access to direct farm purchases to avoid middleman costs.

I do not get commodities. I get cash in lieu. Do not have info on amount received. Sorry.

I don't think the fresh fruits and vegetables are always fresh. Many times these items arrive nearly spoiled. All must be used ASAP.

I need the opportunity. Have not been asked to participate. Thank you.

I would like menus with recipes that would incorporate more fresh fruits and vegetables (new ideas) for reimbursable meals (cycle menus).

I'm just learning. I can't sell commodity foods at a la carte. It only comes once a month.

If commodity dollars could be used to purchase fresh fruits and vegetables it would be a great benefit.

If the money was there - increase in reimbursements.

In our district students love fruit and vegetables. This is definitely the way to go.

Increase in reimbursement would be a huge incentive. We already serve fresh fruits and vegetables every day. A reimbursement would provide more variety.

More availability and better quality products.

More choices. We don't get offered many fresh fruits or vegetables.

More commodity entitlement money for DOD.

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More demand, better pricing.

More DOD entitlement. We could use \$30,000 more.

More DOD money.

More federal money to be able to offer it in places outside the cafeteria and at other times in the classroom to increase students' desire for/exposure to fresh fruits/vegetables.

More money allocated to DOD - we always run out.

More storage space, additional programs to serve increase in enrollment, increase in portion, and menu changes.

Nutrition education needed in classroom for students to know the importance of fresh fruits and vegetables.

Offer it daily at all sites. Implemented this when DOD money was made available. Kids and staff enjoy the additional fruit option - they ate it.

Pre-packing in ½ cup sizes. Pineapple pushups were great but perishable. Students are fussy at times!

Students respond favorably to fresh fruits and vegetables.

The big one is the price and willingness of the students to take it.

The fruit requirement for after school snacks is larger than the portions available through DOD. It would be more practical to require a smaller portion (½ cup vs. ¾) to allow fresh fruit/vegetables to be served.

The installation of a large walk-in refrigerated unit in our central district warehouse.

The main factor is student preference.

Vendor access with no minimum delivery charges.

We are serving 50% more fruits and vegetables and mainly fresh. It would help greatly to get better funding!

We currently offer a minimum of three fruit and three vegetable choices daily at all schools.

We have a farm to school program and district wide nutrition policy. More support from state with competitive food sale enforcement would be helpful.

We love serving fresh fruit and vegetables to our students. We are also members of the farm to school program.

We received a \$60,000 grant for fruit/vegetable pilot program. The program began in 9/2002 and ran through 6/04. The students loved it. Hope they come up with more money to buy fresh fruit and vegetables.

We serve a variety of fresh, frozen and canned every day. Time of year/seasonality is what we base our fresh fruit and veggie purchases.

We use all we are able to get through the program.

We would like to receive fresh carrot sticks, fresh iceberg lettuce, fresh romaine lettuce, apples, oranges, peaches and pears.

Would like more fresh fruits and veggies. More variety would be great.

Appendix C: Survey Instrument

If you have questions about how to complete this survey, please contact: Samia Hamdan, MPH, RD, Research Associate, SNA, at 800-877-8822 ext. 131 or via e-mail at shamdan@asfsa.org

I. Contact Information

Please complete or update your mailing information below:

Name: _____

District: _____

Address: _____

City: _____ St: _____ Zip: _____

1. Please provide the name and title of the person completing this survey if other than the foodservice director.

Name: _____ Title: _____

2. Everyone who completes this survey will receive a **free** summary of the compiled survey results. Please provide the e-mail address where you would like the summary report delivered. **PLEASE PRINT CLEARLY.**

E-mail address for report delivery: _____

Please answer all questions in reference to the 2003-2004 school year.

II. District Demographics

3. What is the total enrollment of your school district?

- ☐ a. 999 or less ☐ c. 2,500 - 4,999 ☐ e. 10,000 - 24,999
☐ b. 1,000 - 2,499 ☐ d. 5,000 - 9,999 ☐ f. 25,000+

4. Please indicate the total number of schools in your district for each of the following categories:

a. Total number of elementary schools = _____

b. Total number of middle schools = _____

c. Total number of high schools = _____

5. Please indicate the number of schools in your district that participate in the following:

	Elementary schools	Middle schools	High schools
a. The number of schools participating in the National School Lunch Program (NSLP)	_____	_____	_____
b. The number of schools participating in the School Breakfast Program (SBP)	_____	_____	_____
c. The number of schools participating in the After School Snack Program	_____	_____	_____

6. District wide, what is your average daily participation (ADP) for the NSLP and the SBP?

- A. District wide ADP for the NSLP: ☐ a. 0-10% ☐ b. 11-20% ☐ c. 21-30% ☐ d. 31-40% ☐ e. 41-50%
☐ f. 51-60% ☐ g. 61-70% ☐ h. 71-80% ☐ i. 81-90% ☐ j. 91-100%
- B. District wide ADP for the SBP: ☐ a. 0-10% ☐ b. 11-20% ☐ c. 21-30% ☐ d. 31-40% ☐ e. 41-50%
☐ f. 51-60% ☐ g. 61-70% ☐ h. 71-80% ☐ i. 81-90% ☐ j. 91-100%

7. At what level are decisions typically made regarding the ordering of **fresh fruits and vegetables**?
- ☐ a. Ordering is centralized, with decisions made at the district level
 - ☐ b. Ordering is decentralized, with decisions made at the school level
 - ☐ c. Both centralized/decentralized
8. Please indicate which of the following type(s) of kitchens your district operates. Check all that apply:
- ☐ a. **Central kitchen** Where meals are prepared for serving at receiving or satellite schools. No student meals are served on-site at a central kitchen.
 - ☐ b. **Base kitchen** Where meals are prepared for serving on-site and for shipment to other locations (including multiple locations within the same school).
 - ☐ c. **Satellite (receiving) kitchen** Where partially or fully prepared meals are obtained from base or central kitchens or an outside vendor. Other than re-heating or refrigeration, no food preparation occurs at a satellite kitchen.
 - ☐ d. **Combination kitchen** Where some food is prepared for on-site consumption and some food is received fully or partially prepared from a central or base kitchen.
 - ☐ e. **On-site kitchen** Where all meals are prepared at the facility in which the kitchen is located.
 - ☐ f. **Other** (please describe: _____)

III. Programs and Services

9. Do you offer salad bar service in ANY school in your district? (NOTE: Salad bar service applies to both reimbursable meals and a la carte service).
- ☐ a. Yes
 - ☐ b. No **[SKIP TO QUESTION 11]**
10. Please indicate the total number of days per week salad bar service is available to students:
- A. Elementary schools: _____ days per week for salad bars OR ☐ no salad bars in elementary schools
- B. Middle schools: _____ days per week for salad bars OR ☐ no salad bars in middle schools
- C. High schools: _____ days per week for salad bars OR ☐ no salad bars in high schools
11. Does your district participate in the Department of Defense Fresh program?
- ☐ a. Yes, for commodity entitlement
 - ☐ b. Yes, for all fruit and vegetable purchases
 - ☐ c. No **[SKIP TO QUESTION 13]**
 - ☐ d. Not sure **[SKIP TO QUESTION 13]**
12. Please list the top five fruits and vegetables your district receives through the Department of Defense Fresh Program:

Top five fruits

1. _____
2. _____
3. _____
4. _____
5. _____

Top five vegetables

1. _____
2. _____
3. _____
4. _____
5. _____

13. Does your district participate with other districts in cooperative buying fruits and vegetables? ☐ a. Yes
☐ b. No
14. Does a private company manage your district's foodservice operation? ☐ a. Yes
☐ b. No **[SKIP TO QUESTION 16]**
15. Does the foodservice management company:
- A. Determine WHERE fruits/vegetables are purchased (e.g., vendor selection)? ☐ a. Yes, always
☐ b. Yes, sometimes
☐ c. No
- B. Determine WHAT fruits/vegetables are purchased? ☐ a. Yes, always
☐ b. Yes, sometimes
☐ c. No
16. Are fruits and vegetables served through the After School Snack Program? ☐ a. Yes
☐ b. No **[SKIP TO QUESTION 18]**
☐ c. Do not have this program **[SKIP TO Q. 18]**
17. How often do you serve fruits and vegetables through the After School Snack Program?
- ☐ a. Less than once per week (i.e., every two weeks)
☐ b. Once per week
☐ c. 2-3 times per week
☐ d. 4 or more times per week

For the following questions: **Processed** fruits and vegetables are those that are **canned, dehydrated, dried, or frozen**. Packaging, such as packaged lettuce, is **NOT** an indication of processing.

18. Do you offer a la carte food sales in ANY school in your district? ☐ a. Yes
☐ b. No **[SKIP TO QUESTION 20]**
19. Please indicate if the following fruit and vegetable categories are sold on the a la carte lines:
- | | Elementary schools | | | Middle schools | | | High schools | | |
|------------------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| | Sold | Not sold | Do not have a la carte | Sold | Not sold | Do not have a la carte | Sold | Not sold | Do not have a la carte |
| a. Fresh fruits and vegetables | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b. Processed fruits and vegetables | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
20. Are student-accessible vending machines available in ANY schools in your district? ☐ a. Yes
☐ b. No **[SKIP TO QUESTION 22]**
21. Please indicate which of the following items are available in student-accessible vending machines:

[illegible]

IV. Fruit and Vegetable Procurement Practices

22. Please indicate the amount of fruit, vegetables, and juice received by your district from the federal commodity program and all other sources for the 2003-2004 school year.

	Items received from the federal commodity program		Items received from all other sources such as private vendors, grocery stores, etc.	
	Number of pounds received	Total dollar value	Number of pounds received	Total dollar value
a. Fresh fruit	_____ lbs.	\$ _____	_____ lbs.	\$ _____
b. Fresh vegetables	_____ lbs.	\$ _____	_____ lbs.	\$ _____
	Number of cases received	Total dollar value	Number of cases received	Total dollar value
c. Frozen fruit	_____ cases	\$ _____	_____ cases	\$ _____
d. Frozen vegetables	_____ cases	\$ _____	_____ cases	\$ _____
e. Frozen juice	_____ cases	\$ _____	_____ cases	\$ _____
f. Canned fruit	_____ cases	\$ _____	_____ cases	\$ _____
g. Canned vegetables	_____ cases	\$ _____	_____ cases	\$ _____
h. Canned juice/bulk juice portioned	_____ cases	\$ _____	_____ cases	\$ _____
i. Dried fruit	_____ cases	\$ _____	_____ cases	\$ _____
j. Dried vegetables	_____ cases	\$ _____	_____ cases	\$ _____

23. For the 2003-2004 school year, what was your district's:

A. Total Fair Market Value (FMV) of **commodity** procurement for all food categories: \$ _____

B. Total food expenditures for **all** food categories. DO NOT include nonfood supplies: \$ _____

24. Please rate how important the following factors would be in your district's decision to order a larger quantity of fresh fruits and vegetables:

	Not at all important				Highly important	No opinion
a. An increase in student demands/preferences	1	2	3	4	5	<input type="checkbox"/>
b. A decrease in cost	1	2	3	4	5	<input type="checkbox"/>
c. An increase in the amount of reimbursable funding	1	2	3	4	5	<input type="checkbox"/>
d. A change in serving size meal requirements	1	2	3	4	5	<input type="checkbox"/>

Please describe any additional factors that would encourage your district to order more fresh fruits and vegetables:

THANK YOU! Please return your survey in the enclosed postage-paid envelope by SEPTEMBER 17, 2004 to AWP Research • 898 Broad Oaks • Herndon, VA 20170